

IN THE CLAIMS:

Please amend the claims as follows:

1. (Currently Amended) A computer-implemented method, embodying a computer program of instructions executable by a computer, for ~~automatically~~ learning consumer behavior, said method comprising:

inputting a ~~loaded~~ shared business opportunity (SBO) tree, wherein said SBO tree comprises:

~~a root node corresponding to an online merchant, who offers promotional tools and SBOs to potential customers;~~

~~child nodes corresponding to first customers, who accepted said promotional tools and said SBOs offered by said online merchant;~~

~~grandchild nodes corresponding to second customers, who accepted said promotional tools and said SBOs offered by said first customers; and~~

~~leaf nodes corresponding to terminal customers, who accepted said promotional tools from parent customers associated with parent nodes of said SBO tree;~~

~~wherein each of said promotional tools is associated with a specific category of item~~

nodes, each of said nodes corresponding to a customer; and
said nodes representing a hierarchical customer-chain comprising at least one parent-child relation;

~~obtaining data relating to all online transactions between said merchant and said first customers, said first customers and said second customers, and said terminal customers and said parent customers;~~

~~wherein said data comprises: customer identities; and past transactions, including redemption of specific promotional tools associated with a particular category of items by a customer associated with a particular node of said SBO tree;~~

~~selecting a particular transaction from said all online transactions;~~

loading a node, corresponding to a customer, with an online transaction record between said customer and a merchant;

identifying a particular said node of said SOB tree, associated loaded with said particular transaction by an identified online transaction record, as a customer node;

identifying a parent node of said particular customer node of said SOB tree;

for each descendent node of said parent node, determining an applicability of a specific promotional tool to a particular category of items, based on said past transactions; and

outputting, to said merchant, a specific promotional tool to a particular category of items for a customer associated with said parent node, based on each applicability of a specific promotional tool to a particular category of items for each customer associated with each descendent node

assigning transaction data, loaded in said customer node, to said parent node,

wherein said transaction data comprises online transaction records between said customer and said merchant, and

wherein said transaction data relates to consumer behavior;

setting said parent node equal to a new customer node;

if said new customer node is not a root node of said SBO tree, then identifying a new parent node of said new customer node and assigning transaction data, loaded in said new customer node, to said new parent node, otherwise analyzing, by said merchant, transaction data of all descendents of said new customer node in said SBO tree; and

selecting, by said merchant, at least one of products and promotional tools to be presented online to a customer, corresponding to said new customer node, based on said analyzing transaction data relating to consumer behavior of said all descendents of said new customer node.

2-5. (Canceled).

6. (Currently Amended) The method of claim 1, wherein said transaction data further comprises any of:

demographics related to ~~[[a]]~~ said customer; and
acquaintances related to ~~[[a]]~~ said customer.

7. (Currently Amended) The method of claim 1, wherein said ~~redemption of a promotional tool comprises~~ tools comprise any of:

discount coupons valid for a particular category of items offered by said merchant;
gift certificates valid for a particular category of items offered by said merchant; and
freebies valid for a particular category of items offered by said merchant.

8. (Currently Amended) The method of claim 1, wherein said ~~determining an applicability of a specific~~ selecting at least one of said promotional ~~tool to a particular category of items~~ tools for a product comprises any of:

correlation analysis;
collaborative filtering; and
associative learning.

9. (Currently Amended) The method of claim 1, ~~further comprising any of~~ wherein said analyzing transaction data comprises any of:

determining pricing for ~~items offered by said merchant~~ products;
performing market segmentation of said customers;
identifying preferences of said customers;
performing marketing targeted at an identified market segment; and
maximizing potential success of a promotional tool.

10. (Currently Amended) The method of claim 1, ~~further comprising providing incentives to said customers~~ wherein said customer is provided incentives to acquire descendent customers descendents.

11-12. (Canceled).

13. (Currently Amended) A computer system for ~~automatically~~ learning consumer behavior, said system comprising:

a memory that stores an inputted ~~loaded~~ shared business opportunity (SBO) tree, wherein said SBO tree comprises:

~~a root node corresponding to an online merchant, who offers promotional tools and SBOs to potential customers;~~

~~child nodes corresponding to first customers, who accepted said promotional tools and said SBOs offered by said online merchant;~~

~~grandchild nodes corresponding to second customers, who accepted said promotional tools and said SBOs offered by said first customers; and~~

~~leaf nodes corresponding to terminal customers, who accepted said promotional tools from parent customers associated with parent nodes of said SBO tree;~~

~~wherein each of said promotional tools is associated with a specific category of item~~

nodes, each of said nodes corresponding to a customer; and

said nodes representing a hierarchical customer-chain comprising at least one parent-child relation; and

a processor configured to:

~~obtain data relating to all online transactions between said merchant and said first customers, said first customers and said second customers, and said terminal customers and said parent customers;~~

~~wherein said data comprises: customer identities; and past transactions, including redemption of specific promotional tools associated with a particular category of items by a customer associated with a particular node of said SBO tree;~~

~~select a particular transaction from said all online transactions;~~

load a node, corresponding to a customer, with an online transaction record between said customer and a merchant;

~~identify a particular said node of said SOB tree, associated loaded with said~~

~~particular transaction by an identified online transaction record, as a customer node;~~
~~identify a parent node of said particular customer node of said SBO tree;~~
~~for each descendent node of said parent node, determine an applicability of a~~
~~specific promotional tool to a particular category of items, based on said past transactions; and~~
~~output, to said merchant, a specific promotional tool to a particular category of~~
~~items for a customer associated with said parent node, based on each applicability of a specific~~
~~promotional tool to a particular category of items for each customer associated with each~~
~~descendent node~~
~~assign transaction data, loaded in said customer node, to said parent node,~~
~~wherein said transaction data comprises online transaction records~~
~~between said customer and said merchant, and~~
~~wherein said transaction data relates to consumer behavior;~~
~~set said parent node equal to a new customer node;~~
~~if said new customer node is not a root node of said SBO tree, then identify a new~~
~~parent node of said new customer node and assign transaction data, loaded in said new customer~~
~~node, to said new parent node, otherwise analyze, by said merchant, transaction data of all~~
~~descendents of said new customer node in said SBO tree; and~~
~~select, by said merchant, at least one of products and promotional tools to be~~
~~presented to a customer, corresponding to said new customer node, based on said analyzing of~~
~~transaction data, corresponding to consumer behavior of said all descendents of said new~~
~~customer node.~~

14-17. (Canceled).

18. (Currently Amended) The system of claim 13, wherein said transaction data further comprises any of:

demographics related to [[a]] said customer; and
acquaintances related to [[a]] said customer.

19. (Currently Amended) The system of claim 13, wherein said ~~redemption of a promotional tool comprises~~ tools comprise any of:

discount coupons valid for a particular category of items offered by said merchant;
gift certificates valid for a particular category of items offered by said merchant; and
freebies valid for a particular category of items offered by said merchant.

20. (Currently Amended) The system of claim 13, wherein said ~~determining an applicability of a specific~~ selecting at least one of said promotional tool to a particular category of items tools for a product comprises any of:

correlation analysis;
collaborative filtering; and
associative learning.

21. (Currently Amended) The system of claim 13, wherein said ~~processor is further configured to perform any of~~ said analyzing transaction data comprises any of:

determining pricing for ~~items offered by said merchant~~ products;
performing market segmentation of said customers;
identifying preferences of said customers;
performing marketing targeted at an identified market segment; and
maximizing potential success of a promotional tool.

22. (Currently Amended) The system of claim 13, wherein said ~~processor is further configured to provide an incentive to said customers~~ said customer is provided incentives to acquire descendent customers descendents.

23-24. (Canceled).

25. (Currently Amended) A computer program storage device readable by machine, tangibly embodying a computer program of instructions executable by said machine to perform a

computer-implemented method for ~~automatically~~ learning consumer behavior, said method comprising:

inputting a ~~loaded~~ shared business opportunity (SBO) tree, wherein said SBO tree comprises:

~~a root node corresponding to an online merchant, who offers promotional tools and SBOs to potential customers;~~

~~child nodes corresponding to first customers, who accepted said promotional tools and said SBOs offered by said online merchant;~~

~~grandchild nodes corresponding to second customers, who accepted said promotional tools and said SBOs offered by said first customers; and~~

~~leaf nodes corresponding to terminal customers, who accepted said promotional tools from parent customers associated with parent nodes of said SBO tree;~~

~~wherein each of said promotional tools is associated with a specific category of item~~

nodes, each of said nodes corresponding to a customer; and

said nodes representing a hierarchical customer-chain comprising at least one parent-child relation;

~~obtaining data relating to all online transactions between said merchant and said first customers, said first customers and said second customers, and said terminal customers and said parent customers;~~

~~wherein said data comprises: customer identities; and past transactions, including redemption of specific promotional tools associated with a particular category of items by a customer associated with a particular node of said SBO tree;~~

~~selecting a particular transaction from said all online transactions;~~

loading a node, corresponding to a customer, with an online transaction record between said customer and a merchant;

identifying a particular said node of said SBO tree, associated loaded with said particular transaction by an identified online transaction record, as a customer node;

identifying a parent node of said particular customer node of said SBO tree;

for each descendent node of said parent node, determining an applicability of a specific promotional tool to a particular category of items, based on said past transactions; and
 outputting, to said merchant, a specific promotional tool to a particular category of items for a customer associated with said parent node, based on each applicability of a specific promotional tool to a particular category of items for each customer associated with each descendent node
assigning transaction data, loaded in said customer node, to said parent node,
wherein said transaction data comprises online transaction records between said customer and said merchant, and
wherein said transaction data relates to consumer behavior;
setting said parent node equal to a new customer node;
if said new customer node is not a root node of said SBO tree, then identifying a new parent node of said new customer node and assigning transaction data, loaded in said new customer node, to said new parent node, otherwise analyzing, by said merchant, transaction data of all descendents of said new customer node in said SBO tree; and
selecting, by said merchant, at least one of products and promotional tools to be presented online to a customer, corresponding to said new customer node, based on said analyzing transaction data relating to consumer behavior of said all descendents of said new customer node.

26-29. (Canceled).

30. (Currently Amended) The computer program storage device of claim 25, wherein said transaction data further comprises any of:

demographics related to [[a]] said customer; and
 acquaintances related to [[a]] said customer.

31. (Currently Amended) The computer program storage device of claim 25, wherein ~~said redemption of a promotional tool comprises~~ tools comprise any of:

discount coupons valid for a particular category of items offered by said merchant;
gift certificates valid for a particular category of items offered by said merchant; and
freebies valid for a particular category of items offered by said merchant.

32. (Currently Amended) The computer program storage device of claim 25, wherein said ~~determining an applicability of a specific~~ selecting at least one of said promotional tool to a ~~particular category of items for a product~~ comprises any of:

- correlation analysis;
- collaborative filtering; and
- associative learning.

33. (Currently Amended) The computer program storage device of claim 25, ~~said method further comprising~~ wherein said analyzing transaction data comprises any of:

- determining pricing for ~~items offered by said merchant~~ products;
- performing market segmentation of said customers;
- identifying preferences of said customers;
- performing marketing targeted at an identified market segment; and
- maximizing potential success of a promotional tool.

34. (Currently Amended) The computer program storage device of claim 25, ~~said method further comprising providing incentives to said customers~~ wherein said customer is provided incentives to acquire descendent customers descendents.

35-36. (Canceled).